

REFORESTATION PLANT LIST						
QTY.	SPECIES	SHADE TOL.	MOIST. REGIME	WET. STATUS	MIN.O.C. SPACING	SIZE & REMARKS
25	Prunus serotina Wild Black Cherry	I	M	FACU-	11'	SEEDLING/WHIP W/TREE SHELTER
25	Rubia pseudoacacia Black Locust	VI	D-M	FACU-	11'	SEEDLING/WHIP W/TREE SHELTER
25	Liriodendron tulipifera Tulip Poplar	I	D-M	FACU-	11'	SEEDLING/WHIP W/TREE SHELTER
25	Quercus rubra Red Oak	MT	D-M	UPL	11'	SEEDLING/WHIP W/TREE SHELTER
25	Fraxinus americana White Ash	MT	D-M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
26	Nyssa sylvatica Black Gum	T	M-W	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
26	Juglans nigra Black Walnut	VT	M	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
26	Acer rubrum Red Maple	VT	D-W	FACU	11'	SEEDLING/WHIP W/TREE SHELTER
26	Cercis canadensis Eastern Redbud	T	M	UPL	11'	SEEDLING/WHIP W/TREE SHELTER
26	Diospyros virginiana Persimmon	I	D-M	UPL	11'	SEEDLING/WHIP W/TREE SHELTER

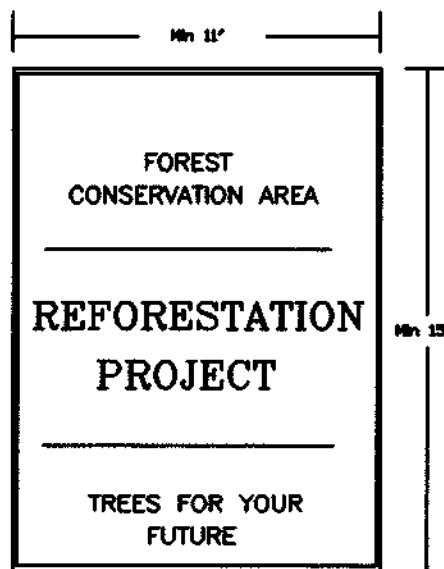
Quantities Of Individual Species And Species Composition May Change Depending On Availability At Time Of Planting. Total Quantity Of Trees For Entire Easement Area Will Not Change. Any Species Substitution Must Be Listed On The Howard County Forest Association List. If Quantities Are Changed, A Minimum Of Five (5) Species Must Be Planted.

#### LEGEND

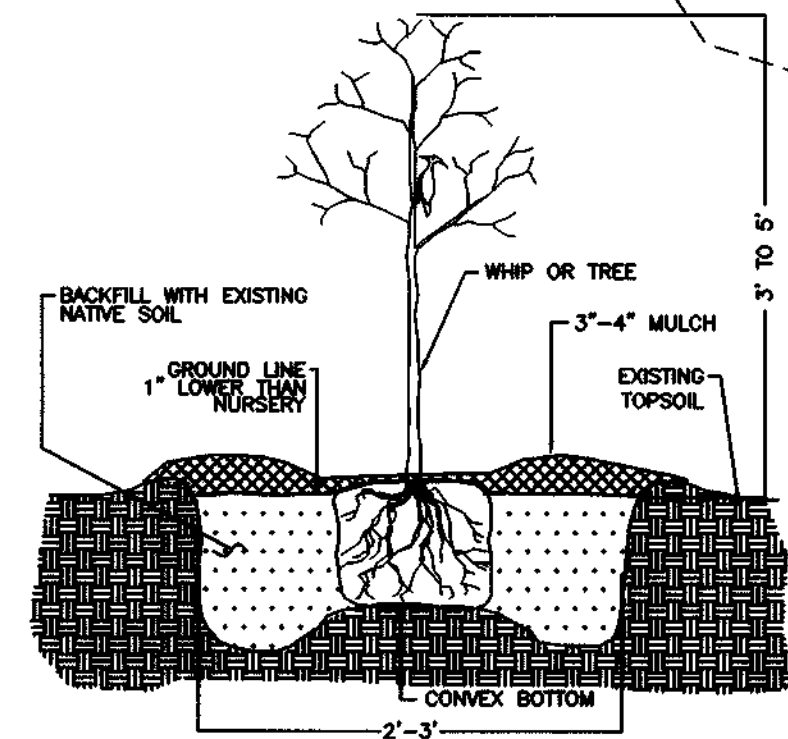
- Denotes Proposed Forest Conservation Easement.
- Denotes Slopes 15 to 24.99%
- Denotes Slopes 25% OR GREATER
- Denotes Soil Boundary/Classification
- Denotes Forest Conservation Area Signs.

#### FOREST CONSERVATION EASEMENT TABLE

LINE	BEARING	DISTANCE
L1	N 40°07'12" W	346.26
L2	N 20°36'06" E	191.96
L3	S 86°33'48" E	46.24
L4	S 34°33'04" E	484.64
L5	S 33°46'42" E	48.30



SIGNAGE DETAIL  
NOT TO SCALE



TREE PLANTING DETAIL  
CONTAINER GROWN

AUTOCAD FILE NAME C:\DRAWINGS\Lead Projects\LISTON PROPERTY.DWG\LISTONREF5.dwg

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Cindy Romo*  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*Mike*  
CHIEF, DEVELOPMENT ENGINEERING DIVISION

10/6/03  
DATE

10/6/03  
DATE

#### PUBLIC REFORESTATION/AFFORESTATION FOREST CONSERVATION EASEMENT TABULATION CHART

EASEMENT NO.	SUBDIVISION NAME	FILE NUMBER(S)	ACREAGE	PLAT NUMBER	RETENTION	AFFOREST	REFOREST
ONE	RED HILL BRANCH OVERLOOK	F-02-64	1.26 Ac.±	15717	NO	0	1.26 Ac.±
TWO	RED HILL BRANCH OVERLOOK	F-02-64	1.04 Ac.±	15717	NO	0	1.04 Ac.±
THREE	BRENTWOOD MANOR EXPANSION	SDP-01-95	1.45 Ac.±	---	NO	0	1.45 Ac.±
FOUR	BOWEN'S PLANTATION	F-03-104	0.73 Ac.±	---	NO	0.03 Ac.	0.70 Ac.±
FIVE	NORDAU SUBDIVISION	F-03-32	2.69 Ac.±	---	NO	0	2.69 Ac.±

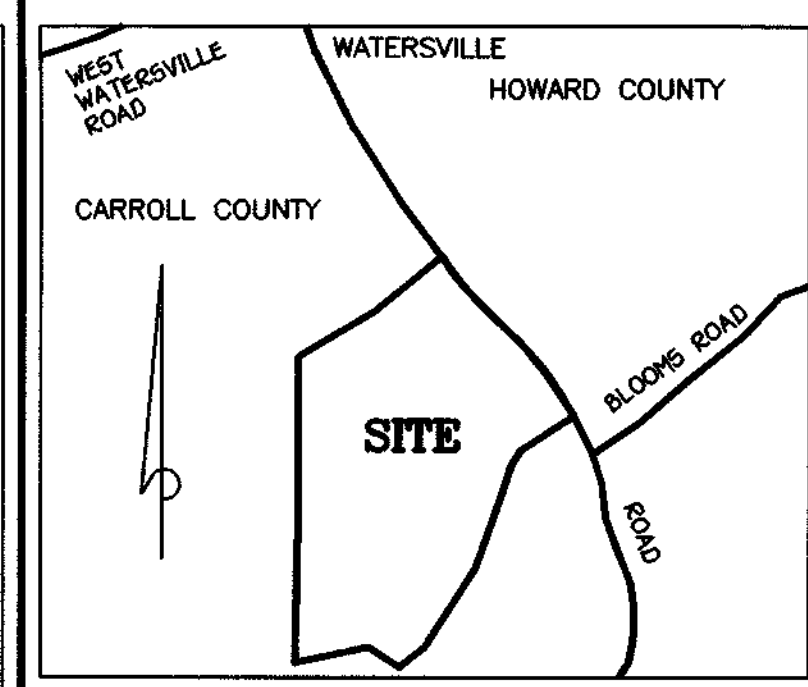
#### General Notes

- The Forest Conservation Easement Has Been Established As An Offsite Forest Mitigation Area for the Bowen Property, Per Section 16.1202 Of The Howard County Forest Conservation Act. No Clearing, Grading Or Construction Is Permitted Within The Forest Conservation easement. However, Forest Management Practices As Defined In The Deed Of Forest Conservation Easement Are Allowed.

DEVELOPER  
RONALD B. WILDMAN  
4747 BONNIE BRANCH ROAD  
ELLICOTT CITY, MARYLAND 21043

OWNER/GRANTOR  
WILLIAM & BARBARA LISTON  
P.O. BOX 228  
342 WATERSVILLE ROAD  
MT. AIRY, MARYLAND 21771

THIS PLAN IS FOR  
FOREST CONSERVATION EASEMENT  
PLANTING PURPOSES ONLY



VICINITY MAP  
SCALE: 1"=1200'

#### PLANTING SPECIFICATIONS AND NOTES

##### SITE PREPARATION AND SOILS

- PROTECTION FENCING AND SILT FENCES FOR SEDIMENT AND EROSION CONTROL ARE TO BE INSTALLED AS A FIRST ORDER OF BUSINESS. SEE PLAN FOR LOCATIONS.
- DISTURBANCE OF SOILS SHOULD BE LIMITED TO THE PLANTING FIELD. FOR EACH PLANT, AS SHOWN ON THE DETAIL, VIEW A PLANTING FIELD OF RADIUS = 5 X DIAMETER OF THE ROOT BALL OR CONTAINER IS RECOMMENDED.
- SOIL MIX FOR ALL PLANTS EXCEPT ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME OF COMPOSTED SLUDGE. SOIL MIX FOR ERICACEOUS MATERIAL: SOIL MIX SHALL CONSIST OF EXISTING NATIVE TOPSOIL MIXTURE AT EACH PLANTING FIELD LOCATION INTO WHICH THE CONTRACTOR SHALL THOROUGHLY INCORPORATE 25% BY VOLUME PEAT MOSS.
- ALL MIXING IN 3 AND 4 SHALL BE LIMITED TO CONTAINER GROWN OR BALL AND BURLAP STOCK ONLY AND CONFINED TO THE PLANTING FIELD AND IMMEDIATE ADJACENT SOIL SURFACE AREA AND SHALL BE DONE TO THE SATISFACTION OF THE DESIGN TEAM OR ENGINEER.

##### PLANT STORAGE AND INSPECTION

- FOR CONTAINER GROWN NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN 2 WEEKS AFTER DELIVERY TO THE SITE.
- FOR BALL AND BURLAP NURSERY STOCK, PLANTING SHOULD OCCUR WITHIN THREE DAYS AFTER DELIVERY TO THE SITE.
- PLANTING STOCK SHOULD BE INSPECTED PRIOR TO PLANTING. PLANTS NOT CONFORMING TO STANDARD NURSERYMAN SPECIFICATIONS FOR SIZE, FORM, VIGOR, ROOTS, TRUNK WOUNDS, INSECTS AND DISEASE SHOULD BE REPLACED.
- UNTIL PLANTED, ALL PLANT STOCK SHALL BE KEPT IN A SHADED, COOL, AND MOISTENED ENVIRONMENT.

##### PLANT INSTALLATION

- THE PLANTING FIELD SHOULD BE PREPARED AS SPECIFIED (SEE DETAIL). NATIVE STOCKPILED SOILS SHOULD BE USED FOR SOIL MIX AND BACKFILL FOR PLANTING FIELD. AFTER PLANT INSTALLATION, RAKE SOILS EVENLY OVER THE PLANTING FIELD AND COVER WITH AT LEAST 4 INCHES OF MULCH. WATER, GENEROUSLY, TO SETTLE SOIL BACKFILLED AROUND TREES.
- PLANTING FIELD DIAMETERS SHOULD BE REDUCED OR PLANTING FIELD MOVED IF IT APPEARS THAT EXCESSIVE EXISTING ROOT DAMAGE MAY OCCUR DURING DIGGING OPERATION NEAR EXISTING FOREST.
- CARE SHALL BE TAKEN WHEN DIGGING PLANTING FIELDS NOT TO CHOP THRU LARGER EXISTING ROOTS FROM EXISTING MATURE TREES. IF ROOTS GREATER THAN 1 1/2 INCH ARE ENCOUNTERED PLEASE TRY TO DIG AROUND THEM AS MUCH AS POSSIBLE TO MINIMIZE IMPACT TO EXISTING TREES. THEY WERE HERE FIRST.
- CONTAINER GROWN STOCK SHOULD BE REMOVED FROM THE CONTAINER AND ROOTS GENTLY LOOSENED FROM THE SOIL. IF THE ROOTS ENIRCLE THE ROOT BALL, SUBSTITUTION IS STRONGLY RECOMMENDED.
- U-SHAPED OR KINKED ROOT SYSTEMS SHOULD ALSO BE NOTED. ROOTS MAY NOT BE TRIMMED ON SITE, DUE TO THE INCREASED CHANCES OF SOIL BORNE DISEASES.
- FOR BALL AND BURLAP STOCK, PLACE TREE IN PREPARED PLANTING FIELD AND REMOVE WIRE AND/OR STRING FROM ROOT BALL. THEN PEEL BACK BURLAP TO BASE OF ROOT BALL AND COVER ENTIRE ROOT BALL WITH TOPSOIL MIXTURE INDICATED ABOVE AND WATER GENEROUSLY.
- FOR TREES PLANTED IN THE AFFORESTATION AREA, CONTRACTOR SHALL NEGATIVELY EFFECTING THE PLANTED STOCK THE NEXT TWO YEARS MAY REQUIRE WATERING ONLY A FEW TIMES A YEAR DURING SUMMER AND DRY MONTHS. AFTER THAT PERIOD, TREES SHOULD ONLY NEED WATER IN SEVERE DROUGHTS. ANY WATERING PLAN SHOULD COMPENSATE FOR RECENT RAINFALL PATTERNS.

##### FERTILIZING

- DO NOT FERTILIZE NEWLY PLANTED TREES WITHIN THE FIRST GROWING SEASON AFTER PLANTING. DOING SO MAY CAUSE A SPURT OF CANOPY GROWTH WHICH THE ROOTS CANNOT SUPPORT AND ADD ADDITIONAL SHOCK TO THE ALREADY DISTURBED PLANT.
- NOTHING SHOULD BE ADDED TO THE SOIL WITHOUT TESTING IT FIRST TO DETERMINE ITS NEEDS.
- IF AND WHEN IT IS TIME TO FERTILIZE, ORGANIC FERTILIZERS ARE PREFERRED TO SYNTHETIC FERTILIZERS. SOME REAL OR SEAMED BASED PRODUCTS ARE AVAILABLE COMMERCIALY AND ARE RECOMMENDED. THEY HAVE THE ABILITY TO SUPPLY NUTRIENTS TO THE PLANT AS NEEDED WHILE MINIMIZING THE RISK OF EXCESS NUTRIENTS ENTERING THE FOREST SYSTEM AND WATER SUPPLY.

#### PLANTING SPECIFICATIONS AND NOTES (Continued)

##### MAINTENANCE SCHEDULE

- ANNUAL MAINTENANCE DURING THE GROWING SEASON, FOR A THREE YEAR PERIOD.
- ASSESS TREE MORTALITY OF PLANTING STOCK, REMOVE AND REPLACE ANY DEAD OR DISEASED PLANTING.
- VOLUNTEER SEEDING OF NATIVE, LOCAL AND ENDEMIC VEGETATION IS TO BE EXPECTED. DO NOT DISCOURAGE THIS EFFORT UNLESS IT IS NEGATIVELY EFFECTING THE PLANTED STOCK.
- REMOVE THROUGH MANUAL MEANS (GRUBBING, PULLING, CUTTING) AGGRESSIVE, NOXIOUS, INVASIVE SPECIES AND ALL HERBACEOUS VEGETATION WITHIN A 3-FOOT RADIUS SURROUNDING THE PLANTED WOODY NURSERY STOCK.
- REMOVE AND DISPOSE OF MAN-MADE TRASH, INCLUDING ITEMS CONTAINED WITHIN ENTIRE PLANTING AREA. DO NOT REMOVE DOWN AND DEAD MATERIAL NATURALLY OCCURRING OR ACCUMULATING, UNLESS IT IS SMOTHERING PLANTING STOCK.
- A 75 PERCENT SURVIVAL OF PLANTED STOCK MUST BE ACHIEVED AT THE END OF THE 24 MONTH MANAGEMENT PERIOD. IF NOT, ADDITIONAL PLANTINGS MAY BE REQUIRED TO ACHIEVE THIS GOAL.

##### SUPERVISION

- ALL FOREST CONSERVATION ACTIVITIES SHALL BE DONE UNDER THE DIRECT SUPERVISION OF SOMEONE FROM THE DESIGN TEAM OR OTHER "QUALIFIED PROFESSIONAL" AS DETERMINED BY THE REQUIREMENTS OF COMAR 08.18.01.01 AND THE MARYLAND DEPARTMENT OF NATURAL RESOURCES, PUBLIC LANDS AND FORESTRY DIVISION.

DATE	NO.	REVISION
PROJECT:		
BOWEN'S PLANTATION		
TAX MAP 31 PARCEL 507		
SECOND ELECTION DISTRICT		
HOWARD COUNTY, MARYLAND		
F-03-104		
TITLE:		
OFF-SITE FOREST MITIGATION PLAN		
AREA:		
LISTON FARM		
PRESERVATION PARCEL		
TAX MAP 2 - PARCEL 17		
FOURTH ELECTION DISTRICT		
HOWARD COUNTY, MARYLAND		
TITLE:		
OFFSITE REFORESTATION		
PLANTING PLAN		
<b>WILDMAN</b> ENVIRONMENTAL SERVICES 4747 BONNIE BRANCH RD. ELLICOTT CITY, MD. 21043 PHONE: (410) 869-9999 FAX: (410) 869-9901 <i>Ronald B. Wildman</i> 9/23/03 DESIGNED BY: R.B.W. DRAWN BY: J.E.P. PROJECT NO. DATE: 9/3/03 SCALE: 1"= 100' SHEET NO. 2 OF 2		

F-03-104